

**REMARKS**

Upon amendment, claims 1-4, 6-14 and 21-23 are pending.

Claim 5 is canceled without prejudice. Claims 1-4 have been amended to recite "A is a phenyl ring" in accordance with the elected subject matter. Applicants respectfully thank the Examiner for the acknowledgement of the elected group I. Claims 1, 2, 3 and 12 have further been amended to correct the typographical errors pointed out by the Examiner on page 8 of the Office Action. Support for the claim amendments can be found throughout the specification and in the claims as originally filed. No new matter has been added.

Applicants respectfully reserve the right to pursue any non-elected, canceled or otherwise unclaimed subject matter in one or more continuation, continuation-in-part, or divisional applications.

Reconsideration and withdrawal of the objections to this application in view of the amendments and remarks herewith, is respectfully requested, as the application is in condition for allowance.

**Rejections under 35 U.S.C. § 112, first paragraph**

Claim 21-23 are rejected under 35 U.S.C. 112, First Paragraph, as allegedly failing to comply with the enablement requirement. In particular, the Examiner states that the specification allegedly "does not reasonably provide enablement for treatment of acute and chronic inflammatory, ischemic or remodeling processes in a human or animal, such as processes of chronic obstructive pulmonary disease, acute coronary syndrome, acute myocardial infarction or development of heart failure or for inhibiting neutrophil elastase in a human or animal." Applicants respectfully disagree and traverse.

In view of these amendments and the following discussions, Applicants respectfully submit that the rejection should be withdrawn.

With regard to the methods of treatment of the present claims, the test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in

the patent coupled with information known in the art without undue experimentation. *U.S. v. Telectronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1988). The examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *Manual of Patent Examining Procedure* ("MPEP") § 2164.04 (citing *In re Wright*, 999 F.2d 1557, 1562 (Fed. Cir. 1993)).

Accordingly:

A specification disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented *must be taken as being in compliance with the enablement requirement ... unless there is a reason to doubt the objective truth of the statements* contained therein which must be relied on for enabling support

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It is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement.

*Id.* (emphases added).

Applicants respectfully submit that whether or not the scope of a claim is broad is irrelevant to the assessment of the enablement of the claim. The question is whether those skilled in the art would have been able to make and use the claimed invention based on the disclosure. (*See U.S. v. Telectronics, Inc.*, at 785).

Applicants respectfully submit that the pending claims are enabled because the specification "contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented." *Id.*

For example, the specification teaches that the compounds of the present invention are useful in that they “show human neutrophil elastase (HNE) inhibitory activity and are therefore suitable for the preparation of medicaments for the treatment of diseases associated with HNE activity.” (Page 18, lines 6-8) The diseases include “acute and chronic inflammatory processes, such as rheumatoid arthritis, atherosclerosis, and especially of acute and chronic pulmonary diseases, such as lung fibrosis, cystic fibrosis, pneumonia, acute respiratory distress syndrome (ARDS), in particular pulmonary emphysema, including smoking-induced emphysema, and chronic obstructive pulmonary diseases (COPD), chronic bronchitis and bronchiectasis, cardiovascular ischaemic diseases such as acute coronary syndrome, acute myocardial infarction, unstable and stable angina pectoris, coronary artery bypass grafts (CABG) and heart failure development, for atherosclerosis, mitral valvular disease, atrial septal defects, percutaneous transluminal coronary angioplasty (PTCA), inflammation after open heart surgery and for pulmonary hypertension. They may also prove useful for an effective treatment of rheumatoid arthritis, acute inflammatory arthritis, cancer, acute pancreatitis, ulcerative colitis, periodontal disease, Chury-Strauss syndrome, acute and chronic atopic dermatitis, psoriasis, systemic lupus erythematosus, bullous pemphigus, sepsis, alcoholic hepatitis, liver fibrosis, Behcet's disease, allergic fungal sinusitis, allergic sinusitis, Crohn's disease, Kawasaki disease, glomerulonephritis, acute pyelonephritis, colorectal diseases, chronic suppurative otitis media, chronic venous leg ulcers, inflammatory bowel disease, bacterial and viral infections, brain trauma, stroke and other conditions in which neutrophil participation is involved.” (Page 18, Line 10 – Page 19, line 10).

The Specification further states “inhibitors of HLE activity can be potentially useful in the treatment of a number of inflammatory diseases, especially of chronic obstructive pulmonary diseases [R. A. Stockley, Neutrophils and protease/antiprotease imbalance, Am. J. Respir. Crit. Care 160, S49-S52 (1999)]. Inhibitors of HLE activity can also be potentially useful in the treatment of acute myocardial syndrome, unstable angina pectoris, acute myocardial infarction and coronary artery bypass grafts (CABG) [C. P. Tiefenbacher et al., Inhibition of elastase improves myocardial function after repetitive ischaemia and myocardial infarction in the rat heart, Eur. J. Physiol. 433, S563-S570 (1997); Dinerman et al., Increased neutrophil elastase release in unstable angina pectoris and acute myocardial infarction, J. Am. Coll. Cardiol. 15,

1559-1563 (1990)], of the development of heart failure [S. J. Gilbert et al., Increased expression of promatrix metalloproteinase-9 and neutrophil elastase in canine dilated cardiomyopathy, *Cardiov. Res.* 34, S377-S383 (1997)] and of atherosclerosis [Dollery et al., Neutrophil elastase in human atherosclerotic plaque, *Circulation* 107, 2829-2836 (2003)].” (Page 1, Line 27 – Page 2, line 6.)

Similarly, it is disclosed that the claimed compounds can be prepared by synthetic procedures described in Scheme on Page 18 and in the Examples.

Finally, the specification discloses various assays which can be readily performed by one of ordinary skill in the art to determine the desired activity without undue experimentation (Page 21 – Page 25). Therefore, it is clear that a sufficient guidance is provided in the specification so as to allow those of ordinary skill in the art to make and use the claimed invention, as required by 35 U.S.C. § 112, first paragraph.

To the extent that assays provided herein are prophetic, Applicants point out that the specification need not contain an example if the invention is otherwise disclosed in such manner that one skilled in the art will be able to practice it without an undue amount of experimentation. *In re Borkowski*, 422 F.2d 904, 908, 164 USPQ 642, 645 (CCPA 1970).

In view of the foregoing, it is clear that sufficient guidance is provided in the specification so as to allow those of ordinary skill in the art to make and use the claimed invention. Indeed, the claimed invention is directed to the use of obtainable compounds. The skilled artisan can readily determine the activity for any of the compounds encompassed by the claims by using the assays described in the specification, which can be readily used to determine that a synthesized compound is useful in the treatment of the diseases recited in the claims. Moreover, the determination by a physician as to whether a claimed compound is effective in treating a recited disease in a given patient is a type of determination that is always made by physicians for every pharmaceutical. Indeed, the determination is a routine one that every physician is prepared to make, and which requires little or no effort. Therefore, Applicants respectfully submit that one reasonably skilled in the art could make or use the invention as claimed without undue experimentation.

In sum, Applicants respectfully submit that: (1) the specification provides sufficient information and guidance to those of ordinary skill in the art to make and use the claimed invention; (2) the Examiner did not provide any factual or legal basis to doubt that the claims are

enabled; and (3) to the extent any experimentation is necessary, such experimentation is not undue. Therefore, Applicants respectfully request that the rejection of the claims under 35 U.S.C. § 112, first paragraph be reconsidered and withdrawn

**Rejections under 35 U.S.C. § 112, Second Paragraph**

Claims 1, 2 and 12 stand rejected under 35 U.S.C. § 112, Second Paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

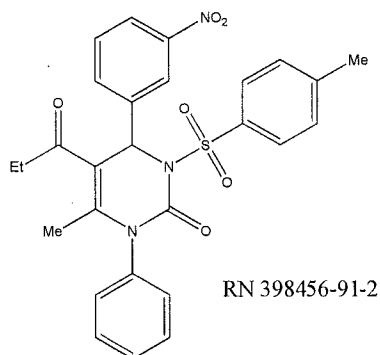
In particular, Claim 1, 2 and 12 stands rejected because certain terms were misspelled. Without conceding the validity of the rejection, Applicants have reviewed these and the other claims and amended claims 1, 2, 3 and 12 to correct any spelling errors Applicant is aware of at this time. No new matter has been added by these amendments.

Applicants respectfully thank the Examiner for such thorough and careful review of the claims. Applicants respectfully request that the rejections of the claims under 35 U.S.C. § 112, Second Paragraph be reconsidered and withdrawn.

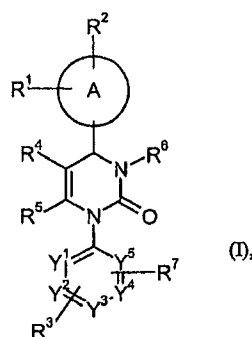
**Rejections under 35 U.S.C. § 102**

Claims 1, 5, 6, 8, 10, 11 and 14 are rejected under 35 U.S.C. 102(b), as allegedly anticipated by Namazi et al. *J. Het. Chem* (2001) 38(5), 1051-1054 ("Namazi") which the Examiner states discloses RN 398456-91-2 which is allegedly encompassed by the instant claims. Applicants respectfully disagree.

RN 398456-91-2 has the structure depicted below. In order to eliminate the potential for confusion, RN 398456-91-2 has been drawn to mirror the orientation of Applicants' Formula (I) which is also presented below.



RN 398456-91-2



(I),

Under the Applicants' Formula (I), RN 398456-91-2 would have the following variable definitions:

- A represents a phenyl ring,
- R<sup>1</sup> represents nitro,**
- R<sup>2</sup> represents hydrogen,
- R<sup>3</sup> represents hydrogen,
- R<sup>4</sup> represents C<sub>1</sub>-C<sub>6</sub>-alkoxycarbonyl,
- R<sup>5</sup> represents C<sub>1</sub>-C<sub>4</sub>-alkyl,
- R<sup>6</sup> represents a group of the formula -SO<sub>2</sub>-R<sup>g</sup> wherein R<sup>g</sup> represents C<sub>6</sub>-C<sub>10</sub>-aryl which is substituted by C<sub>1</sub>-C<sub>6</sub>-alkyl,
- R<sup>7</sup> represents hydrogen,**
- and
- Y<sup>1</sup>, Y<sup>2</sup>, Y<sup>3</sup>, Y<sup>4</sup> and Y<sup>5</sup> each represent CH.

Applicants respectfully note that in the instant Caim 1 (from which rejected claims 6, 8, 10, 11 and 14 depend), R<sup>7</sup> is halogen, nitro, cyano, C<sub>1</sub>-C<sub>6</sub>-alkyl, hydroxy or C<sub>1</sub>-C<sub>6</sub>-alkoxy. As such, RN 398456-91-2 is not encompassed by the instant claims. Indeed, none of the compounds taught by Namazi are encompassed by the instant claims.

As such, Namazi does not teach or disclose compounds, compositions, methods or process encompassed by the instant claims and thus does not anticipate the instant invention.

Applicants respectfully request that the rejections of the claims under 35 U.S.C. § 102, be withdrawn.

**Double Patenting Rejections**

Claims 1-5 and 21-23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of United States Patent Application Serial No. 10/527,391.

As it remains unknown what subject matter claimed and disclosed in the present application will be deemed allowable, any statement regarding the provisional rejection made would be premature. Therefore, Applicants respectfully traverse this rejection and request that this rejection be held in abeyance until claimed subject matter is deemed allowable in the application.

**CONCLUSION**

In view of the amendments and remarks made herein, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are respectfully requested. Please charge any required fee or credit any overpayment to Deposit Account No. 04-1105.

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Respectfully submitted,

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